

U.S. Appl. No. 09/885,705  
Amendment Dated April 26, 2005  
Reply to Office Action of February 14, 2005  
Docket No. 6169-243

IBM Docket No.: BOC9-2001-0003

### Amendments to Claims:

This listing of claims will replace all prior versions and listings of claims in the instant application:

### Listing of Claims:

1. (Currently Amended) A method for defining a markup language representation of state chart data comprising the steps of:

loading state chart data corresponding to a state chart diagram through an interface to a state machine modeling tool, said state chart diagram specifying behavior for a plurality of objects, said state chart data specifying life-cycle states possible for each object and behavior exhibited by said objects for each specified state;

generating header data in accordance with a selected markup language;

for each state specified in said state chart data, retrieving a state name and state transition data from said state chart data, said state transition data specifying event occurrences for transitioning from said state to another specified state;

formatting said retrieved state names and corresponding state transition data according to said selected markup language; and,

saving said header data, and said formatted state names and state transition data in a document formatted according to said selected markup language.

2. (Original) The method of claim 1, further comprising the steps of:  
for each state specified in said state chart data, extracting a composite state action;  
parsing said composite state action into individual state actions;

U.S. Appl. No. 09/885,705  
Amendment Dated April 26, 2005  
Reply to Office Action of February 14, 2005  
Docket No. 6165-243

IBM Docket No.: BOC9-2001-0003

formatting each individual state action according to said selected markup language; and

saving said formatted individual state actions in said document.

3. (Original) The method of claim 1, wherein said selected markup language is the extensible markup language (XML).

4. (Original) The method of claim 1, wherein said state chart diagram is a unified modeling language (UML) specified state chart.

5. (Original) The method of claim 3, further comprising the step of defining a document type definition (DTD) which defines XML elements for use in formatting said state chart data.

6. (Original) The method of claim 5, wherein said formatting step comprises formatting said retrieved state names and corresponding state transition data according to said XML elements defined in said DTD.

7. (Currently Amended) A system for defining a markup language representation of state chart data comprising:

a state machine modeling tool for generating state chart data, said state machine modeling tool specifying behavior for a plurality of objects, said state chart data specifying life-cycle states possible for each object and behavior exhibited by said objects for each specified state; and,

an add-in script to said state machine modeling tool for formatting said state chart data into a markup language representation according to a selected markup language.

U.S. Appl. No. 09/885,705  
Amendment Date: April 26, 2005  
Reply to Office Action of February 14, 2005  
Docket No. 6169-243

IBM Docket No.: BOC9-2001-0003

8. (Original) The system of claim 7, wherein said selected markup language is the extensible markup language (XML).

9. (Original) The system of claim 8, wherein said generated state chart data is unified modeling language (UML) specified state chart data.

10. (Original) The system of claim 8, further comprising a document type definition (DTD) which defines XML elements for use in formatting said state chart data into said markup language representation.

11. (Currently Amended) A system for linking a state machine modeling tool with a state machine run-time engine comprising:

a state chart diagram generated by the state machine modeling tool, said state chart diagram comprising state chart data, said state chart data comprising state chart names, transition data and composite state actions; a state action parser for parsing said composite state actions into component state actions; and,

a markup language formatter for formatting said state chart data and component state actions according to a selected markup language, wherein said state chart diagram specifies behavior for a plurality of objects, wherein said state chart data specifies life-cycle states possible for each object and behavior exhibited by said objects for each specified state, and wherein said state transition data specifies event occurrences for transitioning from one state to another.

12. (Original) The system of claim 11, wherein said state chart diagram is a unified modeling language (UML) specified state chart diagram.

U.S. Appln. No. 09/885,705  
Amendment Dated April 26, 2005  
Reply to Office Action of February 14, 2005  
Docket No. 6169-243

IBM Docket No.: BOC9-2001-0003

13. (Previously Presented) The system of claim 12, wherein said selected markup language is the extensible markup language (XML).

14. (Currently Amended) A state machine system comprising:  
a state machine modeling tool, said modeling tool producing unified modeling language (UML) specified state chart diagrams, each of said state chart diagrams specifying behavior for a plurality of objects using state chart data, said state chart data specifying life-cycle states possible for each object and behavior exhibited by said objects for each specified state;

a conversion script add-in to said state machine modeling tool, said add-in defining markup language representations of said UML specified state chart diagrams produced by said state machine modeling tool; and,

a state machine run-time engine which is separate from said state machine modeling tool, said run-time engine executing said markup language representations defined by said add-in.

15. (Original) The system of claim 14, wherein said markup language representations are extensible markup language (XML) representations of said UML specified state chart diagrams.

16. (Currently Amended) A machine readable storage, having stored thereon a computer program for defining a markup language representation for state chart data, said computer program having a plurality of code sections executable by a machine for causing the machine to perform the steps of:

loading state chart data corresponding to a state chart diagram through an interface to a state machine modeling tool, said state chart diagram specifying behavior for a

U.S. Appl. No. 09/885,705  
Amendment Dated April 26, 2005  
Reply to Office Action of February 14, 2005  
Docket No. 6169-243

IBM Docket No.: BOC9-2001-0003

plurality of objects, said state chart data specifying life-cycle states possible for each object and behavior exhibited by said objects for each specified state;

generating header data in accordance with a selected markup language;

for each state specified in said state chart data, retrieving a state name and state transition data from said state chart data, said state transition data specifying event occurrences for transitioning from said state to another specified state;

formatting said retrieved state names and corresponding state transition data according to said selected markup language; and,

saving said header data, and said formatted state names and state transition data in a document formatted according to said selected markup language.

17. (Original) The machine readable storage of claim 16, further comprising the steps of:

for each state specified in said state chart data, extracting a composite state action;

parsing said composite state action into individual state actions;

formatting each individual state action according to said selected markup language; and,

saving said formatted individual state actions in said document.

18. (Original) The machine readable storage of claim 16, wherein said selected markup language is the extensible markup language (XML).

19. (Original) The machine readable storage of claim 16, wherein said state chart diagram is a unified modeling language (UML) specified state chart.

U.S. Appln. No. 09/885,705  
Amendment Dated April 26, 2005  
Reply to Office Action of February 14, 2005  
Docket No. 6169-243

IBM Docket No.: BOC9-2001-0003

20. (Original) The machine readable storage of claim 18, further comprising the step of defining a document type definition (DTD) which defines XML elements for use in formatting said state chart data.

21. (Original) The machine readable storage of claim 20, wherein said formatting step comprise: formatting said retrieved state names and corresponding state transition data according to said XML elements defined in said DTD.